

71369-262.ST25



SEQUENCE LISTING

<110> Popoff, Steven N.  
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<120> Osteoactivin Protein and Nucleic Acids Encoding the Same,  
Compositions and Methods of Stimulating Bone Differentiation

<130> 71369.262

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<141> 2001-08-30

<150> US 60/229,006

<151> 2000-08-30

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Asp Glu Asn Glu Trp Asp Glu Gln Leu Tyr Pro Val Trp Arg Arg Gly
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Asp Asn Thr Ser Gln Gly Gln His Leu Arg Phe Pro Asp Gly Lys Pro	
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Phe Pro Arg Pro His Gly Arg Lys Lys Trp Asn Phe Val Tyr Val Phe	
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cac aca ctt ggt cag tat ttt caa aag ctg ggt cag tgt tca gca cga	693
His Thr Leu Gly Gln Tyr Phe Gln Lys Leu Gly Gln Cys Ser Ala Arg	
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Val Ser Ile Asn Thr Val Asn Leu Thr Val Gly Pro Gln Val Met Glu	
195 200 205	
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Val Ile Val Phe Arg Arg His Gly Arg Ala Tyr Ile Pro Ile Ser Lys	
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Val Lys Asp Val Tyr Val Ile Thr Asp Gln Ile Pro Ile Phe Val Thr	
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Met Tyr Gln Lys Asn Asp Arg Asn Ser Ser Asp Glu Thr Phe Leu Arg	
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ctc aac tac tct gcc att tcc tac aag tgg aac ttt ggg gac aac act	981
Leu Asn Tyr Ser Ala Ile Ser Tyr Lys Trp Asn Phe Gly Asp Asn Thr	
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Pro Cys Pro Ser Pro Thr Pro Ser Ser Ser Thr Ser Ser	
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Met Pro Thr Gly Tyr Lys Ser Met Glu Leu Ser Asp Ile Ser Asn Glu	
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Val Asp Gly Ile Leu Glu Val Asn Ile Ile Gln Val Ala Asp Val Pro	
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Ile Pro Thr Leu Gln Pro Asp Asn Ser Leu Met Asp Phe Ile Val Thr	
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Cys Lys Gly Ala Thr Pro Thr Glu Ala Cys Thr Ile Ile Ser Asp Pro	
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470 475 480	
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Ser Ala Leu Ile Ser Ile Pro Gly Lys Asp Leu Gly Ser Pro Leu Arg	
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Thr Val Asn Gly Val Leu Ile Ser Ile Gly Cys Leu Ala Met Phe Val	
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acc atg gtt acc atc ttg ctg tac aaa aaa cac aag acg tac aag cca	1701
Thr Met Val Thr Ile Leu Leu Tyr Lys Lys His Lys Thr Tyr Lys Pro	
515 520 525	
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Asp Pro Leu Leu Gln Asp Lys Pro Trp Met Leu *
565                               570

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&lt;210&gt; 2

&lt;211&gt; 572

&lt;212&gt; PRT

&lt;213&gt; Rat osteoactivin

&lt;400&gt; 2

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Gln Tyr Pro Asp His Met Arg Glu Asn Asn Gln Leu Arg Gly Trp Ser
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Ser Asp Glu Asn Glu Trp Asp Glu Gln Leu Tyr Pro Val Trp Arg Arg
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Gly Glu Gly Arg Trp Lys Asp Ser Trp Glu Gly Gly Arg Val Gln Ala
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Ala Leu Thr Ser Asp Ser Pro Ala Leu Val Gly Ser Asn Ile Thr Phe
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Val Val Asn Leu Val Phe Pro Arg Cys Gln Lys Glu Asp Ala Asn Gly
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Pro Phe Pro Arg Pro His Gly Arg Lys Lys Trp Asn Phe Val Tyr Val
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Phe His Thr Leu Gly Gln Tyr Phe Gln Lys Leu Gly Gln Cys Ser Ala
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Arg Val Ser Ile Asn Thr Val Asn Leu Thr Val Gly Pro Gln Val Met
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Glu	Asn	Cys	Arg	Ile	Asn	Arg	Tyr	Gly	Tyr	Phe	Arg	Ala	Thr	Ile	Thr
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Pro	Ile	Pro	Thr	Leu	Gln	Pro	Asp	Asn	Ser	Leu	Met	Asp	Phe	Ile	Val
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Pro	Thr	Cys	Gln	Ile	Ala	Gln	Asn	Arg	Val	Cys	Ser	Pro	Val	Ala	Val
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Thr	Tyr	Cys	Val	Asn	Phe	Thr	Leu	Gly	Asp	Asp	Ala	Ser	Leu	Ala	Leu
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Val	Thr	Met	Val	Thr	Ile	Leu	Leu	Tyr	Lys	Lys	His	Lys	Thr	Tyr	Lys
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<211> 18

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<213> Rat osteoactivin

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<210> 4

<211> 19

&lt;212&gt; PRT

&lt;213&gt; Rat osteoactivin

&lt;400&gt; 4

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 Asp Lys Cys

&lt;210&gt; 5

&lt;211&gt; 574

&lt;212&gt; PRT

&lt;213&gt; Mouse

&lt;400&gt; 5

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 Gln Tyr Pro Asp His Met Arg Glu His Asn Gln Leu Arg Gly Trp Ser  
 35 40 45  
 Ser Asp Glu Asn Glu Trp Asp Glu His Leu Tyr Pro Val Trp Arg Arg  
 50 55 60  
 Gly Asp Gly Arg Trp Lys Asp Ser Trp Glu Gly Gly Arg Val Gln Ala  
 65 70 75 80  
 Val Leu Thr Ser Asp Ser Pro Ala Leu Val Gly Ser Asn Ile Thr Phe  
 85 90 95  
 Val Val Asn Leu Val Phe Pro Arg Cys Gln Lys Glu Asp Ala Asn Gly  
 100 105 110  
 Asn Ile Val Tyr Glu Lys Asn Cys Arg Asn Asp Leu Gly Leu Thr Ser  
 115 120 125  
 Asp Leu His Val Tyr Asn Trp Thr Ala Gly Ala Asp Asp Gly Asp Trp  
 130 135 140  
 Glu Asp Gly Thr Ser Arg Ser Gln His Leu Arg Phe Pro Asp Arg Arg  
 145 150 155 160  
 Pro Phe Pro Arg Pro His Gly Trp Lys Lys Trp Ser Phe Val Tyr Val  
 165 170 175  
 Phe His Thr Leu Gly Gln Tyr Phe Gln Lys Leu Gly Arg Cys Ser Ala  
 180 185 190  
 Arg Val Ser Ile Asn Thr Val Asn Leu Thr Ala Gly Pro Gln Val Met  
 195 200 205  
 Glu Val Thr Val Phe Arg Arg Tyr Gly Arg Ala Tyr Ile Pro Ile Ser  
 210 215 220  
 Lys Val Lys Asp Val Tyr Val Ile Thr Asp Gln Ile Pro Val Phe Val  
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 Thr Met Ser Gln Lys Asn Asp Arg Asn Leu Ser Asp Glu Ile Phe Leu  
 245 250 255  
 Arg Asp Leu Pro Ile Val Phe Asp Val Leu Ile His Asp Pro Ser His  
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 Phe Leu Asn Asp Ser Ala Ile Ser Tyr Lys Trp Asn Phe Gly Asp Asn  
 275 280 285  
 Thr Gly Leu Phe Val Ser Asn Asn His Thr Leu Asn His Thr Tyr Val  
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 Gly Pro Cys Pro Pro Pro Ser Pro Ser Thr Pro Pro Ser Pro Ser Thr

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Ser Asn Glu Asn Cys Arg Ile Asn Arg Tyr Gly Tyr Phe Arg Ala Thr
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Ile Thr Ile Val Glu Gly Ile Leu Glu Val Ser Ile Met Gln Ile Ala
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Asp Val Pro Met Pro Thr Pro Gln Pro Ala Asn Ser Leu Met Asp Phe
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Thr Val Thr Cys Lys Gly Ala Thr Pro Met Glu Ala Cys Thr Ile Ile
      420                      425                      430
Ser Asp Pro Thr Cys Gln Ile Ala Gln Asn Arg Val Cys Ser Pro Val
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Ala Val Asp Gly Leu Cys Leu Leu Ser Val Arg Arg Ala Phe Asn Gly
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Ser Gly Thr Tyr Cys Val Asn Phe Thr Leu Gly Asp Asp Ala Ser Leu
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Ala Leu Thr Ser Thr Leu Ile Ser Ile Pro Gly Lys Asp Pro Asp Ser
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Pro Leu Arg Ala Val Asn Gly Val Leu Ile Ser Ile Gly Cys Leu Ala
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Val Leu Val Thr Met Val Thr Ile Leu Leu Tyr Lys Lys His Lys Ala
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Tyr Lys Pro Ile Gly Asn Cys Pro Arg Asn Thr Val Lys Gly Lys Gly
      530                      535                      540
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 <213> Human

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Arg Pro Ser Ala Tyr Met Arg Glu His Asn Gln Leu Asn Gly Trp Ser
      35                      40                      45
Ser Asp Glu Asn Asp Trp Asn Glu Lys Leu Tyr Pro Val Trp Lys Arg
      50                      55                      60
Gly Asp Met Arg Trp Lys Asn Ser Trp Lys Gly Gly Arg Val Gln Ala
      65                      70                      75                      80
Val Leu Thr Ser Asp Ser Pro Ala Leu Val Gly Ser Asn Ile Thr Phe
      85                      90                      95
Ala Val Asn Leu Ile Phe Pro Arg Cys Gln Lys Glu Asp Ala Asn Gly
      100                      105                      110
Asn Ile Val Tyr Glu Lys Asn Cys Arg Asn Glu Ala Gly Leu Ser Ala
      115                      120                      125
Asp Pro Tyr Val Tyr Asn Trp Thr Ala Trp Ser Glu Asp Ser Asp Gly
      130                      135                      140

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Pro	Phe	Pro	His	His	Pro	Gly	Trp	Arg	Arg	Trp	Asn	Phe	Ile	Tyr	Val
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Phe	His	Thr	Leu	Gly	Gln	Tyr	Phe	Gln	Lys	Leu	Gly	Arg	Cys	Ser	Val
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Arg	Val	Ser	Val	Asn	Thr	Ala	Asn	Val	Thr	Leu	Gly	Pro	Gln	Leu	Met
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Glu	Val	Thr	Val	Tyr	Arg	Arg	His	Gly	Arg	Ala	Tyr	Val	Pro	Ile	Ala
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Gln	Val	Lys	Asp	Val	Tyr	Val	Val	Thr	Asp	Gln	Ile	Pro	Val	Phe	Val
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Thr	Met	Phe	Gln	Lys	Asn	Asp	Arg	Asn	Ser	Ser	Asp	Glu	Thr	Phe	Leu
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Lys	Asp	Leu	Pro	Ile	Met	Phe	Asp	Val	Leu	Ile	His	Asp	Pro	Ser	His
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Phe	Leu	Asn	Tyr	Ser	Thr	Ile	Asn	Tyr	Lys	Trp	Ser	Phe	Gly	Asp	Asn
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Gly	Pro	Cys	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Arg	Pro	Ser	Lys	Pro	Thr
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Pro	Asp	Glu	Asn	Cys	Gln	Ile	Asn	Arg	Tyr	Gly	His	Phe	Gln	Ala	Thr
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Ile	Thr	Ile	Val	Glu	Gly	Ile	Leu	Glu	Val	Asn	Ile	Ile	Gln	Met	Thr
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Asp	Val	Leu	Met	Pro	Val	Pro	Trp	Pro	Glu	Ser	Ser	Leu	Ile	Asp	Phe
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Val	Val	Thr	Cys	Gln	Gly	Ser	Ile	Pro	Thr	Glu	Val	Cys	Thr	Ile	Ile
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Ser	Asp	Pro	Thr	Cys	Glu	Ile	Thr	Gln	Asn	Thr	Val	Cys	Ser	Pro	Val
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Asp	Val	Asp	Glu	Met	Cys	Leu	Leu	Thr	Val	Arg	Arg	Thr	Phe	Asn	Gly
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Ser	Gly	Thr	Tyr	Cys	Val	Asn	Leu	Thr	Leu	Gly	Asp	Asp	Thr	Ser	Leu
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Ala	Leu	Thr	Ser	Thr	Leu	Ile	Ser	Val	Pro	Asp	Arg	Asp	Pro	Ala	Ser
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Pro	Leu	Arg	Met	Ala	Asn	Ser	Ala	Leu	Ile	Ser	Val	Gly	Cys	Leu	Ala
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Ile	Phe	Val	Thr	Val	Ile	Ser	Leu	Leu	Val	Tyr	Lys	Lys	His	Lys	Glu
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Tyr	Asn	Pro	Ile	Glu	Asn	Ser	Pro	Gly	Asn	Val	Val	Arg	Ser	Lys	Gly
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&lt;210&gt; 7

&lt;211&gt; 1725

&lt;212&gt; DNA



## &lt;213&gt; Mouse

## &lt;400&gt; 7

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## &lt;210&gt; 8

## &lt;211&gt; 1683

## &lt;212&gt; DNA

## &lt;213&gt; Human

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1683

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